THREAT OF VACANT SEATS IN ENGINEERING COLLEGES: REASONS AND REMEDIES

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Abstract: The paper explores the present scenario and vacancy position trend of engineering educational institutions in India. In the last two/three years, it has become extremely difficult to run engineering colleges efficiently because of competition at all levels. Though the strength of aspirant students is increasing, because of the phenomenal growth of Engineering Institutes, the situation is getting worst. The paper is the outcome of long standing experience of the author, through his interaction with the various best Engineering/Management, Global Institutions all over. The Primary data is analyzed to investigate the reasons for large number of vacant seats in professional colleges. The last two decades had witnessed unprecedented growth in institutes of higher education in engineering, primarily due to private sector participation. The private sector is expected to provide useful contribution in achieving the target of 30%, Gross Enrollment Ratio (GER) by 2020 set by Government of India. Though the private institutes have grown in number they have failed in maintaining expected quality. They are not able to attract the high ranking students, hence are denied by the majority stake holders.

The issues of quality, access, equity, inclusiveness, are prime factors which need to be given priority attention of the stakeholders. Unemployability of graduates is also becoming a cause of concern. Large number of vacant seats in self financing colleges is threatening the financial viability of these institutions. Proper regulatory framework supported by mutual trust and accountability is important for the establishment of vibrant global private higher education institutions which can ensure quality, access, and inclusiveness. The stakeholders are preferring such quality Institutions and not opting for such substandard/inferior quality institutions. Another major reason is failure in maintaining standards by the regulatory bodies through effective monitoring. Since privatization of Engineering Education, the quality is a major concern. In spite of the shortfalls and expected compliances of conditions pointed out by inspection Committees of University/State Government and AICTE/NBA/NAAC regulatory authorities, the managements do not comply with the said lacunae and pull on years together. In the present paper the author has discussed various salient points for eradication of Non-creative practices and imparting an upshot in engineering education, through his experiential learning case studies. It is aimed to develop and create keen interest among erudite educationists and readers.

Keywords: Gross Enrollment Ratio, unemployability, inclusiveness

I. Introduction

Private institutes now account for four-fifths of the enrollment in professional higher education and one-third in overall higher education. According to the FICCI and Ernst &Young report on higher education, 91% engineering schools, 95% pharmacy, 64% business and 50% medical schools in India are non-government. Over 1.4 crore students are enrolled in 31,000 higher education institutions across the country. The growth in private sector has reached a significant proportion in contributing higher education

In 1947 there were 20 universities, 500 colleges 2.1 lakh students in India. There is phenomenal increase in the no. of institutions; no. of universities increased 26 times, colleges 64 times no. of students 81 times now. In 2012, there are 600+ Universities with break up as: Central 7%, state Government46%, State Private16%, Deemed 16% and National Institutes (IIT’s/NIT’s) 9%. All these statistics will reveal, of the fact that the growth is enormous.

All the states in India, are facing the problem of thousands of vacant seats in almost all colleges. Some Government Colleges also find it difficult to fill all seats. Particularly this is observed in last few years. Let us see the position of state of Andhra Pradesh as an exemplary case.
II. Present Scenario Case Study – Andhra Pradesh

In this year (2012), in Andhra Pradesh, six colleges have zero admissions; 24 have less than 10 in 253 colleges 65% or more. In the State, 1,00,392 seats remained vacant in the Convener quota after the first phase of counseling. Last year (2011) 76,310 seats were vacant while 40,273 seats went vacant in 2010. Out of the 2.10 lakh candidates eligible for admissions this year only 1.37 lakh candidates attended certificate verification and reported the centers of which 1,34,373 lakh students were allotted seats.

Table 1: Branch wise breakup of Total Allotted and vacant seats for Andhra Pradesh

<table>
<thead>
<tr>
<th>Branch</th>
<th>Total</th>
<th>Allotted</th>
<th>Vacant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE</td>
<td>52153</td>
<td>27705</td>
<td>24448</td>
</tr>
<tr>
<td>ECE</td>
<td>61135</td>
<td>38912</td>
<td>22223</td>
</tr>
<tr>
<td>EEE</td>
<td>34797</td>
<td>18433</td>
<td>16364</td>
</tr>
<tr>
<td>IT</td>
<td>17338</td>
<td>6212</td>
<td>11126</td>
</tr>
<tr>
<td>Mech</td>
<td>31879</td>
<td>22541</td>
<td>9428</td>
</tr>
<tr>
<td>Civil</td>
<td>22613</td>
<td>15184</td>
<td>7429</td>
</tr>
</tbody>
</table>

In government colleges, seats were totally filled, because of less fees. 114 private colleges could also attract 100 per cent admissions. Some of these colleges in the city include CBIT, Vasavi, VNR Vignan Jyothi, Vidya Jyothi, CVSR College and Gokaraju Rangaraju among others. The following table indicates the seats allotted in No. of Colleges for Academic Year 2011-12. It indicates that the quality expected by monitoring authorities is not achieved by these colleges.

<table>
<thead>
<tr>
<th>No. of Seats allotted by the State through CAP between</th>
<th>0-5</th>
<th>6-10</th>
<th>11-15</th>
<th>16-20</th>
<th>21-25</th>
<th>26-30</th>
<th>31-35</th>
<th>36-40</th>
<th>41-45</th>
<th>46-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Colleges</td>
<td>18</td>
<td>12</td>
<td>8</td>
<td>13</td>
<td>14</td>
<td>17</td>
<td>15</td>
<td>14</td>
<td>13</td>
<td>11</td>
</tr>
</tbody>
</table>

More than 20 private engineering colleges across the State have received less than 50 students each. In each of the 14 colleges, between 50 and 100 students have taken admission. This is the scenario when the average sanctioned strength for most of the colleges is more than 400 seats.

The one college that did not receive any student at all is Eklavya College of Technology and Science, against a sanctioned strength of 378. Zero% is an indication that stake holders are alert and do not accept inferior colleges, which is their right of choice and they are exercising it.

Similarly, Gopal Krushna College of Engineering and Technology (GKCET) received just three students, International Institute of Engineering and Technology (IIET) received only six students and eight students took admission in Indotech College of Engineering and Vikash College of Engineering for Women both.

Ironically, other than GKCET, the rest of the colleges, on an average, had been sanctioned more than 300 seats each. Some reputed colleges too faced the problem of less student admitted.

Top colleges like CV Raman College of Engineering failed to fill up its full seats, getting 743 students against the sanctioned strength of 945. (78.62%). The Synergy Institute of Technology, which is also considered one of the preferred institutes by the engineering aspirants, received 332 students against the sanctioned strength 661. (50.22%) Similarly, the Orissa Engineering College (OEC), which has 724 seats, filled 576 (72.15%) students. This position exists despite of fees in the state range of Rs. 50,000/- to 70,000/-. The above sample state is discussed at length for elaborating and understanding the factual position to the readers. Almost similar or worst situation exists in all the other states and the vacant seats in engineering institutions are growing and the scenario, in most of the states is as shown in the table. This is an alarming situation and if; the cognizence of it is not taken; with corrective actions, at the college and university end of effective monitoring; the situation will worsen from year to year. (N.K. Prashant, New Indian Express, 28th August 2012).
From all above statistics, it is clear that all over around 25% seats are vacant.

III. Reasons for vacant seats

1. Poor quality of some of the colleges.
2. Management not ensuring quality in :-
   a. Imparting teaching learning process effectively.
   b. Recruitment of qualified and experienced faculty with, malafied intentions to reduce salary bills.
   c. Providing state of the art infrastructure, equipment/software, as par syllabi requirement.
   d. Providing facilities to staff in respect of the following:-
      i. Salary examination remuneration and allowances as per AICTE/State Government/University norms
      ii. Pay scales as per University State Government /AICTE Norms.
      iii. Reimbursement of T.A./D.A. for presenting papers at International/national Conferences.
      iv. Internet connectivity(Uninterrupted)
      v. Pursuing higher studies
      vi. Facilities and Perks
   e. Providing modern teaching aids such as Interactive Boards / LCD’s etc.
   f. Non appointment of able Training and Placement Officer, to ensure quality and quantity of placements.
   g. Non appointment of qualified and experienced Principal, Professors, Associate Professors, because of acute shortage of Ph.D. faculty.
   h. Non compliance of lacunae pointed out by regulatory committees and pulling over by managing the committee members.
3. Lack of team work and motivation amongst the team members.
4. Starting second shift in many renowned colleges and not running the same effectively is a major reason for these vacant seats.
5. Poor results.
6. Poor placements.
7. Learning objectives not fully achieved.
8. Non creation of student’s full interest in learning process and its applications in real life situations.
   (Gosavi V.P., Glogift 2012, Brig Pathak et.al.)
9. Lack of monitoring by Apex Bodies like AICTE/DTE/Universities in ensuring quality.
10. Lacking in upgrading curricula in 2/3 years to suit industrial needs, with participation of industrial personnel.
11. Provide modular courses with scope for choosing combination of students, parents, choice, to suit Industrial needs.

IV. Effects of Vacant Seats.

As stated above, many colleges are started with mere motive of collection centers by fees, donations and do not bother for quality. The Inferior colleges are not preferred by students, parents and society. It results in non viability of effective functioning and financial management of Institutes totally collapses. Because of crisis of financial management, management is tempted to save an expenditure which ultimately results in loosing qualified and experienced faculty. Because of the inefficient management which is not quality conscious, qualified and experienced faculty do not join such colleges. Hence the Management appoints inferior and substandard staff.

For the dearth of faculty, as expected, students do not prefer such inferior quality staff and not opt for such colleges, the result of which is that such colleges still go into viscous circle. This is natural because the parents and students...
being the stake holders in the system, exercise their right and select the best institutions, with proved performances, such as results, quality placements, going through their websites ensuring faculty qualifications/experience/reputations etc.

Second shift of such colleges also runs full, which is a reward to them for their ensuring quality. This also results in increasing the utilization index of their infrastructure. Hence the decision of second shift cannot be blamed also. Effect of such stand results in hampering development of upcoming /new Institutions by students/parents which do not have such credits ready for demonstration. The new and upcoming colleges in this scenario should overcome the teething problems and ensure every care to appoint qualified faculty, ensuring them pay scales, salary and allowances as per norms, with attractive perks for attracting them and retaining. This expenditure incurred by such colleges can be reimbursed by way of fees, after audit and through approved fees by fee regulation committee. This will take the college at appropriate level of standards and improved results/placements and will be automatically in demand by students/parents (Dr. Gosavi V.P. June 2012, Dr. J.P. Shrivastava etal)

Today the challenge is to maintain a delicate balance between enormity of the task and the constant up gradation of quality at all levels with innovations and research. With such small number of students, being admitted, it will become financially difficult for many of these colleges to sustain. Maintaining the staff and infrastructure will become next to impossible if such conditions persist and The basic AICTE norms if not followed voluntarily by all and will ultimately result in non availability of the bare minimum facilities in the colleges.  (http://www.indiaeducationreview.com)

Even though the State Government has fixed the tuition fees between Rs. 40,000 and Rs. 1,00,000 many of the engineering colleges take additional amount in the name of hostel or laboratory development fees is a fact revealed, through large volume of complaints received. With most of the colleges seeking approval online, proper verification of these colleges too has become difficult. And only surprise checks are imposed by regulatory bodies on the basis of complaints received, do not ensure the desired level of quality.
The private sector jumped and tried their best to fill the gap of demands and available seats but ignoring the quality aspects, mistaking it to be just another commercial activity, for sip honey money and using it for the other purposes they planned.

V. Poor Utilization of Resources

The poor management of scarce resources available for higher education is a serious concern for a country looking to harness demographic dividend. It highlights the failure of the academic leaders to manage the institutions properly. If the available resources are utilized effectively and efficiently it will result in efficient running of institutions.

VI. Need of Private Sector/ Participation in Higher Education

From the following reports and reviews, it will be clear that participation of Private Sector in imparting Quality Engineering Education is need of the Hour. Without private sector participation Engineering education is like Human life without Heart.

According to report of committee on corporate sector participation in higher education, headed by N R Narayana Murthy and submitted in 2012 to planning commission, India needs additionally 26 million seats over the next decade (2012-2022). (Hindustan Times, Jan 18 2012).The committee further estimates that the higher education sector needs Rs. 40,000 crore ($8 billion) in the 12th five year plan, and half of it have to come from corporate sector. The committee further recommends that:

a. The central government should contribute Rs. 15000 crore.
b. The state government should contribute Rs. 5000 crore in form of land grants, institutional investments to set up education clusters and knowledge hubs.
c. Government should allocate land free of charge for 999 years. The land should be usable for setting up academic facilities, incubation centers and technology parks.
d. To enhance access of higher education it was recommended to set up Indian Corporate Higher Education Scholarship with a corpus of Rs 1,000 crore contributed by top 1,000 Corporations. The contributions
made by a corporate, a foundation or grant-making entity should be eligible for 300 % deduction from taxable income.

e. A 10-year multiple entry visa for multiple visits of six months duration for each visit for all academic and research visitors should be issued within 24 hours of application. A visa for five-year visit should be issued within five working days. All academic and research visitors should be exempted from current visa regulations of minimum salary norms. This would facilitate free movement of faculty, students, and enhanced interaction with students and faculty, and reset in best sharing of Resources.

f. The committee suggested setting up Rs 5,000 crore 'Indian Corporate R&D Fund' with support from the Center and corporate murphy comments that” The existing higher education system in India lags in Comparison to global standards and is inadequate to meet the demand. There is a need to engage the corporate sector to invest in existing institutions and setup new ones” (a ser of @ apeejay.edu)

VII. PROMOTING PPP MODELS is a need of the hour

Government has taken initiative to open 20 additional IIIT’s with 15% capital infusion from PSU’s. Central government will contribute 50%, state government 35%. The move is aimed at enhancing administrative autonomy to these institutes (Nanda et al., 2012). Enhancing the quality of students entering higher education: The government has tied up with Pearson Education to improve access and quality at school level. Presently only 20% schools are run by private sector (Nanda, 2012).

National Skill Development Corporation (NSDC) plans to develop 500 million skilled people by 2022. The creation of a separate skill development corporation highlights the systemic failure of vocational and higher education sector to produce employable people for industry.

The extra capacity generation would need an extra Rs. 10 lakh crore by 2020. The funding requirement is Rs. 0.4 million per seat. Private sector can bridge the gap in budgetary allocation and required allocation. From 1999 to 2008, from 71% to 83% in USA. In Japan it increased from 45% to 58%. In Malaysia it increased from 28% to 32%. (Live mint-epaper Jan 2013)

VIII. Challenges

The sector is facing lot of challenges, some of them are:

a) Poor Utilization of budgetary allocations.

b) Poor implementation of schemes by state governments.

c) Lack of coordination among various stakeholders.

d) Lack of proper management focus to enhance customer satisfaction in terms of better skills placements.

e) Parents are losing confidence on high cost of higher education without any return in terms of job placements.

f) Poor placements in professional colleges.

IX. Conclusion

From all the above discussion, it is clear that:
Though the demand of engineers in India and globe is increasing, the real requirement will be met with if quality and employable graduates are produced mainly by the private Engineering Institutes. This means that there is dire need of the Private Engineering Colleges to cater this need but they must maintain the desire quality and contribute in producing quality Engineers.

Also it is obvious that participation of Private Sector in Higher Engineering Education is a need of the hour. To ensure this desired quality the Regulatory Bodies must ensure that the Private Colleges:

Follow 100% norms for infrastructure, qualified and experienced faculty, facilities like salary and allowances to faculty as per norms, all facilities to students through close monitoring. Imparting effective teaching learning must be ensured by college Managements. If this is not being done, harsh decisions of closing down of colleges which have failed in attracting / filling 50% of sanctioned strength need to be taken.

If needed norms/guidelines of these bodies may be changed to accommodate and participate private sector. Such colleges also may be given a chance to improve upon by taking consultation of the renowned institutes with proved performance for years together.
Norms laid down by universities, State Governments and AICTE, NBA, NAAC & ISO if followed 100% voluntarily by all institutes, will definitely result in attaining the desired level & quality of Engineering Education, which will ultimately fill 100% seats of all colleges.

All the above measures if followed fully the problems faced by many of the Colleges in all the States will be solved and the engineering education will be up to the expectation of the stakeholders and will suffice the need of budding engineers required for the Industry.

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